MAJOR SOURCE

MAJOR SOURCE

National Emission Standard for Hazardous Air Pollutants
for Secondary Aluminum Production
Subpart RRR

Scrap Dryer/Delacquering Kiln/Decoating Kiln

refers to units that remove coatings and various organic contaminants such as oil, paint, plastic from scrap prior to melting, heating scrap to 1000 ^{O}F.

Owners or operators of secondary aluminum production facilities that are **MAJOR** sources must meet the all of the following for each scrap dryer/delacquering kiln/decoating kiln by March 23, 2003:

note: **Area Sources are required to meet emission limits for D/F**

Regulated Pollutants & Emission Limits: see Table 1 s.63.1505(d) & (e)

Pollutant	Limit	Alternate Limit If equipped with Afterburner[1]
THC (total hydrocarbons as propane)	0.06 pounds/ton of feed/charge (0.03 kg/Mg charge)	0.20 pounds/ton of feed/charge (0.10 kg/Mg charge)
PM[2] (particulate matter)	0.08 pounds/ton of feed/charge (0.04 kg/Mg charge)	0.30 pounds/ton of feed/charge (0.15 kg/Mg charge)
HCl (hydrogen chloride)	0.80 pounds/ton of feed/charge (0.40 kg/Mg charge)	1.50 pounds/ton of feed/charge (0.75 kg/Mg charge)
D/F TEQ (dioxin/furan toxic equivalent units)	$3.5x10^{-6}$ grains per ton of feed/charge (0.25 ug/Mg charge)	$7.0x10^{-5}$ grains per ton of feed/charge (5.0 ug/Mg charge)

Operational Standards: see Table 2 s.63.1506(a),(b),(c) & (g)

- LABEL each unit with:
  - Type of Unit
  - Emission Limit and Operational Standard
  - Control Method
  - Operating Parameters (such as charge used; afterburner temperature and design residence time)[3]
- Inspect emission unit and control device(s) once per month
- Operate a device that records the weight of each charge or production weight
- For Fabric Filters and Afterburners used to meet emission limits:
  - Maintain Temperature as established in performance test
  - Operate in accordance with OM&M plan
- Initiate Corrective Action when process or operating parameters deviate from those established in OM&M plan.

[1] Afterburners must be designed for a minimum retention time of 1minute at 1400^{o}F.
[2] Emission limitations include only front-half emissions following EPA method 5.
[3] Operating parameter ranges and requirements are incorporated into your facility OM&M plan. Capture/collections systems for Add-On control devices must be designed/installed according to ACGIH methods

Monitoring Requirements: see Table 3 s.63.1510

- Develop and follow an Operation, Maintenance & Monitoring **(OM&M) Plan**:
  See standard for specific requirements {fact sheet}
- Install, calibrate, operate/monitor and maintain a device to measure and record total weight of feed/charge to the Dryer/Kiln
- Fabric Filters and lime injected Fabric Filters:
  Install, calibrate, maintain and operate bag leak detection system or continuous opacity monitoring system (COMS)
- Afterburners:
  Continuously monitor and record temperature
  Install temperature monitoring device at exit of combustion zone
  Calibrate temperature according to NIST reference methods
  Inspect afterburner annually.

Performance Testing – Compliance Demonstration Requirements:

See also s.63.1511 & s.63.151

Performance testing is required at the outlet of the Dryer/Kiln or Control Device.
Note: testing is allowed on representative emission units with approval of permitting authority (WDNR-Air Management Program)

- All Testing must be completed prior to March 23, 2003.

A. General Requirements:

- Prepare and submit a **Site-Specific Testing Plan** for approval to your Department of Natural Resources (DNR) Air Management compliance inspector. Plan contains: test program summary; test schedule; Data quality objectives; Internal/external Quality Assurance program.
- Conduct the **Initial Performance Test** and report results in Notification of Compliance Status Report, NOCS. Performance testing is used to establish operating parameters/ranges and is required every 5 years. {see fact sheet and example}.

B. Requirements for Add-On Control Devices used to meet emission limits:

- For Dryers/Kilns with afterburners, maintain temperature of afterburner at or above 1400^{O}F in each 3-hourblock testing period. Submit written certification in NOCS.
- Establish minimum/maximum operating parameter values and submit in NOCS for
  - Feed rate/charge rate: measure and record the total weight of feed/charge to unit.
  - Afterburners[4] -for units using afterburners to meet the emission limits:
    - Conduct performance evaluation for temperature monitoring device
    - Operating Temperature; continuously measure and record every 15minutes.
    - Determine and record 15 minute block average and 3 hour block average temperatures.
  - Lime injected Fabric Filters: for units using lime injected fabric filters to meet emission limits:
    - Inlet temperature; continuously measure and record every 15minutes.

[4] Owners or Operators using add on control equipment to meet the emission limit must provide information in the NOCS that capture/collection system meets the standards established in the American Conference of Governmental Industrial Hygienists "Industrial Ventilation: A Manual of Recommended Practice" chapters 3 and 5

- Determine and record 15 minute block average and 3 hour block average temperatures.
- Establish value for feeder setting, for each operating cycle or time period, by recording the setting during the performance test runs.
- Ensure lime in feed silo is free flowing at all times

C: Equations for Determining Compliance: see s. 63.1513

Pollutant	Compliance Equation	Test Method
THC (total hydrocarbons as propane)	$E = \frac{C \times MW \times Q \times K_1 \times K_2}{M_v \times P \times 10^6}$	EPA Method 25A
PM (particulate matter)	$E = \frac{C \times Q \times K_1}{P}$ (equation 7)	EPA Method 5
HCl (hydrogen chloride)	$E = \frac{C \times Q \times K_1}{P}$ (equation 7)	EPA Method 26A
D/F TEQ (dioxin/furan toxic equivalent units)	$E = \frac{C \times Q \times K_1}{P}$ (equation 7)	EPA Method 23

Where:

E= emission rate in (lb/ton)

C= concentration in (gr/dscf)

Q= volumetric flow rate of exhaust gas in (dscf/hr)

K1= conversion factor (1 lb/7000gr)

P= production rate (ton/hr)

MW=molecular weight THC as propane

K2=conversion factor ($1ft^3/ft^3$)

Notifications: see s. 63.1515

Notifications and Reports should be submitted to Department of Natural Resources-Air Management Program. They may be submitted as an amendment(s) to your facility Operation Permit application.

- Initial Notification
- Notification of Compliance Status, **NOCS**: submit by- **May 24, 2003**
  Must be signed by responsible official to certify accuracy.
  - **Includes:**
    - **Methods used to Determine Compliance**
    - **OM&M plan;** approved Operation, Maintenance & Monitoring
    - **SMM plan;** Startup, Shutdown and Malfunction
    - **Site Specific Test Plan;** approved
    - **Results of Performance test**
    - **Compliant operating Parameters value/range**
    - **Manufactures specifications/design for afterburner**
    - **Capture/Collection equipment Design information**
    - **Unit Labeling Procedures**

Reports: see s. 63.1516 & s. 63.1517

- Startup, Shutdown and Malfunction Plan/Reports, SSM plan:{see example}

- Excess Emission Summary Report- submit semiannual (every 6 months) includes:
  - Corrective actions not taken within 1 hour
  - Excursion of Compliant operating parameter(s) including temperature
  - Startup, shutdown or malfunction did not follow procedures in SSM plan
  - If **no** deviations from established parameters; report *"No Excess Emissions"*

- Annual Compliance Certification: {see example}

Specific Requirements for Add-On Control Devices used to meet Limits

Fabric Filters

- Install and Operate a Bag Leak Detection System with Alarm or Continuous Opacity Monitor
- Follow OM&M plan
- Initiate Corrective Action within 1 hour of alarm
- Operate so Alarm sounds less than 5% of operating time
- Record: Inlet Temperature in 15 min intervals
  3-hr Block Average Temperature
  Excursions from operating values, cause and corrective action

Afterburner and Lime-Injected Fabric Filter

- Operate Afterburner Temperature at or above temperature established in Performance Test
- Follow OM&M plan
- Inspect Annually- keep records of inspection
- Maintain Inlet Temperature to Fabric Filter at or below temperature established in Performance Test
- Maintain free flowing lime in hopper or silo at all times
- Operate with lime Feeder setting/injection rate within range established during Performance Test
- Record: Afterburner operating temperature in 15 min intervals
  Inlet Temperature to Fabric Filter in 15 min block averages
  Excursions from operating values, cause and corrective action
  Lime feeder setting or injection rate
  Total Operating Hours, and records of each alarm